Beaver Lake Monitor

A publication of the Beaver Lake Management District Advisory Board ✧ Volume 2, Issue 3 ✧ July 1999

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Watershed-friendly Tips

Home Maintenance

Cedar Roofs—Never power wash a cedar roof: pressure washing can reduce the life of your cedar shakes by years. Instead, scrape away moss and pine needles by hand and apply only as much preservative as the wood will hold without running off. Collection pans should be placed at the bottom of roof downspouts to collect any excess preservative.

Paint Clean Up— To ease your clean up task and stay watershed friendly, start with water-based products. Avoid cleaning painting equipment outdoors and use an indoor sink if you are connected to the sanitary sewer. If you are on a septic system, you will want to leave the rinse water in a bucket until the paint solids settle out. The clear liquid can be decanted into the septic systems while the solids should be mixed with kitty litter for disposal in the garbage.

The Praises of Mulch

Mulching offers many benefits to the homeowner and garden. In addition to reducing weed growth by providing a physical barrier, mulching can also reduce your watering needs.

Select a mulch based on your specific landscaping need. Compost works great as a spring fertilizer and a weed barrier for annual or perennial flowerbeds. For large open areas, you may want to use a landscape fabric and cover with a decorative bark for long-term weed control. Simple items like newspaper, when thickly layered, can also be used to effectively smother weeds or eliminate grass from an area for future planting. The newspaper must be weighted down with another material like straw, wood shavings, or soil to hold in place. Both the newspaper and cover materials will eventually decompose and add to the soil organic layer.

More Tips

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Lawn Maintenance

Dandelion Control– Dandelions become established through wind-dispersed seed and form a thick taproot that serves as a food reserve. Control by hand digging the entire plant and root. In large lawns, use a tool that allows you to pull the roots rapidly while working in a standing position. Additionally, watering an area first makes it easier to get the entire root. Spread a little grass seed in newly created bare spots to prevent new weed establishment.

Moss Control–Moss is a native northwest plant. Most mosses prefer shade, moisture, and poor, acid soils. If moss is thriving in your lawn, consider leaving it there. Immediate control is achieved by raking it out of lawns or by applying an iron-based product. Long-term control requires correcting the conditions that encourage moss growth. Water your lawn infrequently but deeply, making sure the water is penetrating deeply to the root zone and not running off. Proper aeration and thatching of lawns will ensure good water retention. Soil should be periodically limed and fertilized to encourage the growth of the desired plants or turf.

Car Maintenance

Motor Oil–Used motor oil is the largest source of oil pollution to surface waters and should be recycled rather than dumped on the ground or down a storm drain. Your local Shuck's or Al's Auto Supply are two of many local businesses that accept used motor oil.

Antifreeze–Avoid disposing your used antifreeze on the ground or in a stormdrain. As antifreeze moves through your cooling system, it picks up heavy metals that are toxic to aquatic life. Additionally, the sweet smell of antifreeze is appealing to animals and can cause accidental poisoning. Collect your used antifreeze and dispose of it at your local household hazardous waste drop-off location. For location information, call (206) 689-3051.

Information sources for this article include: (1) the Watershed Waltz and Sammamish Swing; (2) Washington Toxic Coalition web site; and (3) Hazardous Waste Management Program Web site.

Surfing for Information

For more information on how to be watershed-friendly with your daily home activities, explore these Web sites:

Surface Water Quality
www.ci.seattle.wa.us/util/RESLONS/swq

Hazardous Waste Management
www.metrokc.gov/hazwaste/

King County Lakes
splash.metrokc.gove/wlr/waterres/lakes/kc_lakes.htm

Seattle Tilth
www.speakeasy.org/~tilth/

Washington Toxic Coalition
www.accessone.com/~watoxics/index.html

WSU Cooperative Extension
king.wsu.edu/NatResources/NatResIndex.htm

Long-Live the Drainfield

Many homes in the Beaver Lake areas have on-site septic systems to treat household wastewater from sinks, toilets, and tubs. A typical septic system includes both a septic tank and a drainfield. The tank functions to separate solid, liquid, and floating materials from the household wastewater stream. The liquid portion, in turn, is discharged to the drainfield where soil treatment occurs.

To ensure the long life of your drainfield, you can do a few simple things: (1) use high quality toilet paper; (2) avoid using caustic materials like bleach, ammonia, and other commercial household cleaning products; and (3) avoid additive products designed to "enhance" your septic system's function.

To test the quality of your toilet paper, place a single sheet in a jar of water and shake. If after a minute or so the paper can be lifted from the jar as an intact sheet, your paper is good. On the other hand, if your paper dissolves into smaller bits after this test, your paper is low quality. These smaller pieces can pass through to the drainfield system, eventually clogging and shortening the life of your drainfield.

Remember that your septic system relies on a healthy bacteria population supplied naturally by you. You don't need to add any product to enhance its function and you should avoid using household products that are bactericides to ensure the long-life of your drainfield!

Questions? Call the Seattle-King County Health Department at (206) 296-4932.

A Horse of a Different Color: Green

What does it mean to be a homeowner living within the Beaver Lake Watershed? It means having access to the lovely cool waters of Beaver Lake to swim in during the summertime. It is a great delight on a hot summer day, or on a warm evening, to make the quick drive to Beaver Lake Park to swim in this small jewel of a lake.

However, living within the Beaver Lake Watershed also carries the responsibility of protecting the lake so that future generations in the new city of Sammamish can enjoy this lovely lake.

For my family, living in the Beaver Lake Watershed means responsible horsekeeping. My husband Brian and I moved with our two children to our small acreage about 3 years ago. Part of the reason we moved to this property was so that I could realize a longtime dream of bringing my 20-year-old horse, Jeb, home. I've had Jeb since he was 3, broke him myself, and when I moved back to Washington (I'm a native) from upstate New York, I moved Jeb with me. But that's another story.

Soon after Brian and I moved to our little "farm," we learned that we were part of the Beaver Lake community and the Beaver Lake Watershed. Because we have a small stream that runs through our property, we began working with the King Conservation District (KCD) to create an environmentally friendly horse farm (a small urban horse farm). A horse farm located within a watershed can have a detrimental affect on the environment—nutrient runoff from manure can contaminate surface water and groundwater. We surmised that our small stream might eventually run into Beaver Lake, and we didn't want to pollute the steam or the lake.

The concept behind the KCD's Model Horse Farm Project (and the Horses for Clean Water project) is to create a "green" or environmentally friendly horse farm. A representative of the KCD worked to help us create our "green" horse farm. To limit mud, we built special turnout areas for the horses (because our pasture is too small for year-round use in this rainy climate) and installed downspouts on barns and shelters to collect and direct runoff. We also built manure bins for composting the 45 lbs of manure that is produced daily by one horse.

We collect the manure daily from the turnouts, and dump the manure in our composting bins. Our composting system consists of three bins, side-by-side, each measuring 8x8x4 feet. When the first bin is full, we flip it to the second bin, and start filling the first bin again. When the first bin is again full, we flip the contents of the second bin into the third bin, flip the contents of the first bin into the second bin, and so on. If all this sounds like hard work, you're right; it motivated us to acquire a small farm tractor.

We have learned that composting manure is a bit of an art. We got best results when we didn't pick too much of the wood-chip footing from the turnouts or too much of the sawdust bedding. We also cover the manure bins with tarps so that the composting manure doesn't get too wet or too dry. Covering the manure bins has the additional advantage of preventing rainwater from leaching nutrients in the manure into the groundwater.

Jeb's owners have created an environmentally friendly horse farm in part by following King Conservation District's Model Horse Farm Project.

A Horse of a Different Color

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In the beginning stages of decomposition, when the manure is composting well, it's hot. The heat helps in the decomposition process and supposedly kills weed seeds and parasites. As the compost ages, it changes texture, smell, and is full of red worms. It's truly beautiful (to a gardener, for sure!). By the way, composting is something every homeowner can do (on an appropriate scale, of course). You can compost your kitchen waste, as well as leaves and lawn clippings.

I've learned from the King Conservation District literature that composted manure is an excellent source of nutrients and organic matter. It can be used to replace some or all of the commercial fertilizer now being used. When manure is applied in proper concentrations and at the right time of the year, plants rapidly use the nutrients, so that they won't end up in streams, lakes, or groundwater. Manure should be applied at the same time of the year when commercial fertilizer would be applied—when the plants are growing, or just before annual crops (like vegetables) are seeded. If manure is applied during the nongrowing season—fall, winter, or early spring—it will often run off the field or leach through the soil into the water supply.

If you're interested in composted manure, there are several horse farms in the Beaver Lake Area that offer free composted manure, including Red Gate Farm on SE 24th street. Manure is often thought of as a waste produce, when in fact, composted manure makes a terrific fertilizer. We plan to use our composted manure on our pasture.

Thanks to Sharon Steinbis for this article.

Beaver Lake Monitor

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1998 BEAVER LAKE LMD ANNUAL REPORT

Background on the Lake Management District

During the late 1980's, water quality monitoring programs conducted by King County identified that Beaver Lake was at risk for degradation in quality as the surrounding land was developed. In 1993, King County completed the Beaver Lake Management Plan, a comprehensive study of Beaver Lake and the surrounding watershed. The study was funded in part by the Beaver Lake Protection Association and marked the beginning of an ongoing partnership between the local community and King County.

In order to protect water quality at historical conditions, the study's conclusions emphasized that additional watershed protection was needed as development occurred. In 1994, the King County Council adopted a special storm water rule that designates the Beaver Lake watershed as a special management area for phosphorus control (phosphorus is the main nutrient that leads to degradation of lake water quality). Because this added regulation requires higher costs to implement and enforce, the County Council requires property owners within the watershed to participate financially in the preservation of Beaver Lake. In 1995, the property owners within the watershed formed a Lake Management District (LMD) to complete activities in four categories:

- Lake, stream, and wetland monitoring
- Community involvement and education
- Stormwater facility monitoring and inspection
- Construction site inspection and monitoring

During 1996, a six member Citizens' Advisory Board for the LMD was established. The board sets the annual work program and oversees the expenditure of the district's revenues. In its first three years, the LMD Advisory Board has focused most of its efforts on the first two categories.

Finances are in the Black

In 1998, the district collected $35,600 in revenue and interest while spending only $28,600. The fund balance entering 1999 was $66,600. Figure 1 illustrates the 1998 expenditures by category.

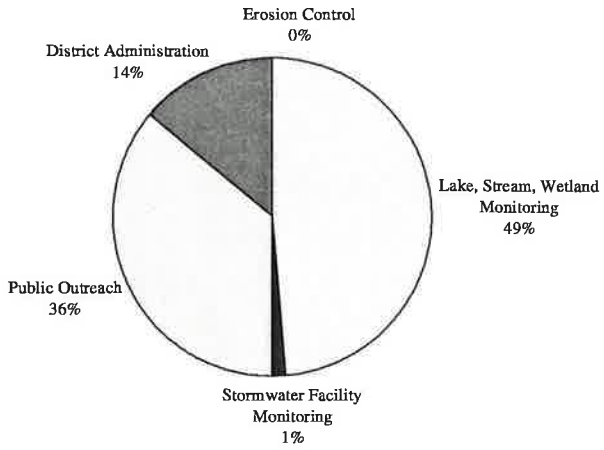

Figure 1: 1998 LMD Expenditures by Category.

Water Quality in Beaver Lake Remains Good

In 1998, half of the LMD funds were spent on monitoring the quality of the streams entering Beaver Lake and the adjacent wetlands which also drain to the lake. The 1998 results suggest that the water quality entering the lake remains essentially unchanged when compared with the 1991-92 management plan study year.

While the continued health of Beaver Lake is good news, the majority of new residential development in the watershed is yet to come. The data collected to date provides essential information for evaluating the effectiveness of the County's regulations thus far.

Community Education Continues

Education of watershed residents remains an important element in protecting Beaver Lake. Existing residences within the watershed contribute a significant proportion of the total phosphorous loading of Beaver Lake. Thus, reducing residential loading is essential for maintaining the lake's water quality. In 1998, the LMD Advisory Board began publishing a quarterly newsletter to provide information to watershed residents on how to reduce their impact on water quality. The board also developed a demonstration garden at Beaver Lake Park that will show how native plants can be incorporated into homeowner's yards and gardens.

Stormwater Facility Monitoring Considered

The proper function of stormwater facilities is fundamental to the protection of Beaver Lake water quality. The board evaluated options for monitoring the Trossach's stormwater pond (located along East Beaver Lake Drive SE) separately as well as in conjunction with the plat owner who monitored the pond during the winter. The board decided to postpone monitoring the pond and await the outcome of the developer funded monitoring program.

1999 Outlook Includes Additional Monitoring and Stronger Outreach

The 1999 LMD work program focus on ongoing monitoring of the lake's streams and further development of the public education program. Quarterly publication of the Beaver Lake Monitor newsletter will continue and a LMD web page will be premiered. In October 1999, a comprehensive lake monitoring program will begin which will continue through September 2000. The data collected from this monitoring program will be used to update the *Beaver Lake Management Plan (1993).*